BROCADE

Brocade Fabric OS v6.1.0_del1

Release Notes v1.0

September 17, 2008

Document History

Document Title	Summary of Changes	Publication Date
Brocade Fabric OS v6.1.0_del1 Release Notes v1.0	First release	September 17, 2008

Contents

Overview

Brocade Fabric OS v6.1.0_del1 provides support for the Brocade M5424 8Gb Fibre Channel SAN I/O Modules design for the Dell PowerEdge M1000e Blade Server systems.

Brocade Fabric OS v6.1.0_del1 contains all features associated with v.6.1.0. The following are features that have been added specifically for this release in support of the Brocade M5424 8Gbyte Fibre Channel SAN I/O Modules.

New Feature Descriptions

The Brocade M5424 SAN I/O modules fully support the functionality of Brocade FOS 6.1.0. Note that these modules are custom designed for Dell PowerEdge M1000e Chassis.

Supported Switches

Fabric OS v6.1.0_del1 supports only the Brocade M5424 SAN IO Module.

Documentation

Fabric OS 6.1.0_del1 is based on FOS 6.1.0 and FOS 6.1.0 documentation, specifically the Brocade Fabric OS Administrator's Guide (#53-1000598-03) should be referenced for all features and functions not noted in these release notes. Features and functions of the Brocade M5424 are equivalent to Brocade 300 referenced in those documents. For Brocade M5424 SAN IO Module Access Gateway, refer to Brocade Access Gateway Administration Guide (#53-1000605-02). The differences to that document are noted below:

Standards Compliance

This software conforms to the Fibre Channel Standards in a manner consistent with accepted engineering practices and procedures. In certain cases, Brocade might add proprietary supplemental functions to those specified in the standards. For a list of standards conformance, visit the following Brocade Web site: *http://www.brocade.com/sanstandards*

Technical Support

Contact your switch supplier for hardware, firmware, and software support, including product repairs and part ordering. To expedite your call, have the following information immediately available:

1. **General Information**

- Technical Support contract number, if applicable
- Switch model
- Switch operating system version
- Error numbers and messages received
- **supportSave** command output
- Detailed description of the problem, including the switch or fabric behavior immediately following the problem, and specific questions
- Description of any troubleshooting steps already performed and the results
- Serial console and Telnet session logs
- Syslog message logs

2. **Switch Serial Number**

   The switch serial number and corresponding bar code are provided on the serial number label, as shown here.

   FT00X0054E9
   FT00X0054E9

   The serial number label for the Brocade M5424 is located on the right side of the module.

3. **World Wide Name (WWN)**

   Use the **wwn** command to display the switch WWN.

   If you cannot use the **wwn** command because the switch is inoperable, you can visually get the WWN from the same location as the serial number.

Important Notes

This section contains information that you should consider before you use this firmware release.

Fabric OS Compatibility

The following table lists the earliest versions of Brocade software supported in this release, that is, the *earliest* supported software versions that interoperate. Brocade recommends using the *latest* software versions to get the greatest benefit from the SAN.

For a list of the effective end-of-life dates for all versions of Fabric OS, visit the following Brocade Web site:

http://www.brocade.com/support/end_of_life.jsp

Supported Products and FOS Interoperability	
Brocade 2000-series switches	Not supported, end of support (December 2007)
Brocade 3000, 3200, 3800	v3.2.1c
Silkworm 3014, 3016, 3250, 3850 and Brocade 3900, 4100, 24000, 7500, 4012, 200E, 48000	v5.1 and higher
Silkworm 12000	v5.0.x
Brocade 4900	v5.2.0 and higher
Brocade 4012, 4016, 4018, 4020, 4024	v5.2.1 and higher
Brocade 5000	v5.2.1 and higher
Brocade 4424	v5.3.0_emb and higher
Brocade 7600	v5.3.0 and higher
Brocade DCX	v6.0.0 and higher
Secure Fabric OS (on any model)	Not Supported
Mi10k, M6140, ED-6064, ES-3232, ES-4300, ES-4400, ES-4500, ES-4700 (McDATA Fabric Mode and Open Fabric Mode) [1]	M-EOS v9.6.2 [2]
McDATA ED-5000 32-port FC director	Not Supported
Multi-Protocol Router interop	
Brocade 7420	XPath v7.4.1
Brocade 7500 and FR4-18i blade	v5.1.0 and higher
McDATA SANRouters 1620 and 2640	Not Supported

Notes:

[1]Other M-EOS models may participate in a fabric with FOS v6.0.0, but may not be directly attached via E_port to any products running FOS v6.0.0. The McDATA ED-5000 director may not participate in a mixed M-EOS/FOS fabric.

[2]It is highly recommended that M-EOS products operate with the most recent version of M-EOS released and supported for interoperability. M-EOS 9.6.2 is the minimum version of firmware that can be used to interoperate with FOS 6.0.0 or later. M-EOS 9.7 or later is recommended for optimum fabric performance in a mixed FOS and M-EOS fabric.

Firmware Upgrades and Downgrades

Brocade Fabric OS v6.1.0_del1 should only be loaded onto the Brocade M5424 SAN IO Module. This version of FOS is not supported on any other Brocade switch.

Fabric Scalability

Fabric OS v6.1.0_del1 supports the same fabric scalability as Fabric OS v5.3.x, that is 2,560 ports with 50 domains.

Other Important Notes and Recommendations

Adaptive Networking/Flow-Based QoS Prioritization:

- When using QoS in a fabric with 4G ports or switches, FOS v6.0 or later must be installed on all products in order to pass QoS info. E_Ports from the DCX to other switches must come up AFTER 6.0 is running on those switches.
- Any products that are not capable of operating with FOS 6.0 may NOT exist in a fabric with Flow based QoS. Major problems will occur if previous generation 2G products exist in the fabric.

FCS Automatic Distribution

- When using the FCS Automatic Distribution feature in Fabric OS v6.0 or later, all switches in the fabric must be running FOS v6.0 or later. If any switches are running FOS v5.x or earlier, only manual distribution can be used.
- FOS v6.0 or later will only allow FCS automatic distribution when in strict mode, requiring only switches with FOS v6.0 or later.

Access Gateway

- When in Access Gateway mode, the Automatic Port Configuration policy may not work when attached to M-EOS switches. M-EOS ports should be set to G_port to prevent problems with port type discovery.

Port Fencing

- The default settings for port fencing have very low thresholds, and may fence ports that experience a small number of errors. **It is recommended that these threshold values be increased for use in production environments.** Different platforms may require different threshold settings for optimum behavior. Port Fencing is only available with the optional Fabric Watch license.

Port Mirroring

- Proper behavior of Port Mirroring functionality requires that the entire frame path must contain either only 8G ASICs or only 4G ASICs. If a frame path contains a mix of 8G and 4G ASICs then this functionality will not work as intended.

Documentation Updates

This section provides information on last-minute additions and corrections to the documentation. The most recent Fabric OS v6.1.0 documentation manuals are available on the Brocade Partner Network: *http://partner.brocade.com/*

Brocade Fabric OS Administrator's Guide (Publication Number 53-1000598-03)

On page 349, replace the NOTE in the middle of the page with the following:

> **NOTE:** For TI over FCR, all switches in the backbone fabric and in the edge fabrics must be running Fabric OS v6.1.0 or later.

On page 351, in the section "Limitations of TI zones over FC routers," add the following bulleted item:

- For TI over FCR, failover must be enabled in the TI zones in the edge fabrics. The failover mode for TI zones in the backbone fabric can be enabled or disabled.

On page 359, in step 2b, replace the sample commands with the following:

```
E1switch:admin> zone --create -t ti TI_Zone1 -p "4,8; 4,5, 1,-1; 6,-1"
E1switch:admin> zone --show
Defined TI zone configuration:
TI Zone Name:   TI_Zone1
Port List:      4,8; 4,5; 1,-1; 6,-1
Status: Activated      Failover: Enabled
```

On page 360, in step 3b, replace the sample commands with the following:

```
E2switch:admin> zone --create -t ti TI_Zone1 -p "9,2; 9,3; 9,6; 1,-1;
4,-1"
E2switch:admin> zone --show
Defined TI zone configuration:
TI Zone Name:   TI_Zone1
Port List:      9,2; 9,3; 9,6; 1,-1; 4,-1
Status: Activated      Failover: Enabled
```

On page 361, in step 4a, replace the sample commands with the following:

```
BB_DCX_1:admin> zone --create -t ti TI_Zone1 -p "1,9; 1,1; 2,4; 2,7;
10:00:00:00:00:08:00:00; 10:00:00:00:00:02:00:00;
10:00:00:00:00:03:00:00"
BB_DCX_1:admin> zone --show
Defined TI zone configuration:
TI Zone Name:   TI_Zone1
Port List:      1,9; 1,1; 2,4; 2,7; 10:00:00:00:00:08:00:00;
10:00:00:00:00:02:00:00; 10:00:00:00:00:03:00:00
Status: Activated      Failover: Enabled
```

On page 365, in the section "Supported configurations for traffic prioritization," change the bulleted item "To be assigned high or low priority…" to the following:

- To be assigned high or low priority, hosts and targets must be connected to one of the following:
    - Brocade 300

- Brocade 5100
- Brocade 5300
- FC8-16, FC8-32, or FC8-48 port blade in the Brocade DCX platform.

On page 368, in the section “License requirements for Fibre Channel routing”, add the following note:

NOTE
Enabling the Integrated Routing license and capability does *not* require a switch reboot.

In Chapter 1, Getting Started, under the heading Licensed Features, the table ‘License Requirements’ on page 16 has an entry on Integrated Routing. In the column ‘Where license should be installed’, it should read as follows:

- On local switch only

In Chapter 1, Getting Started, under the heading Disabling DHCP, on page 9, step 4 should read as follows:

4. When you are prompted for DHCP[On], disable it by entering **off**.

In Chapter 18, Administering Extended Fabrics, under the heading Determining how many ports can be configured for long distance, change the following note:

From:

Note: The 10 Gbps FC10-6 blade has two port groups of three ports each. For extended ISLs, all buffers available to a group are used to support one port at up to 120 km.

To:

Note: The 10 Gbps FC10-6 blade can support up to 100km for each of 6 ports. The FC10-6 blade supports L0 and LS modes but does not support LE and LD modes.

On page 363, in the section “QoS zones”, add the following paragraphs:

NOTE
QoS can be used for device pairs that exist within the same fabric only. QoS priority information is not passed over EX_ or VEX_Ports and should not be used for devices in separate fabrics.

If a QoS zone name prefix is specified in an LSAN zone (a zone beginning with prefix “LSAN_”), the QoS tag is ignored. Only the first prefix in a zone name is recognized. For example, a zone with the name “LSAN_QOSH_zone1” is recognized as an LSAN zone and not a QoS zone.

On page 389, in the section “Zone definition and naming”, add the following paragraph:

The “LSAN_” prefix must appear at the beginning of the zone name. LSAN zones may not be combined with QoS zones. See “QoS zones” on page 363 for more information about the naming convention for QoS zones.

Brocade Access Gateway Administrator's Guide (Publication Number 53-1000605-02)

Chapter 3, Connecting Devices Using Access Gateway, page 33

Add the following note after the procedure, "Enabling NPIV on the M-EOS switch"

Note: You can run the **agshow** command to display Access Gateway information registered with the fabric. When an Access Gateway is exclusively connected to Non-FOS based switches, it will not show up in the " **agshow** " output on other Brocade Switches in the fabric.

On page 52, in Table 9, correct port mapping table information for Brocadce 4424 and add model M5424 to model reference alongside 4424 as shown below.

Brocade Model	Total Ports	F_Ports	N_Ports	Default F_ to N_Port Mapping
4424 / M5424	24	1-16	17-23, 0	17-23, 0 as N-Port with failover enabled, failback enabled 1, 2 mapped to 17 3, 4 mapped to 18 5, 6 mapped to 19 7, 8 mapped to 20 9, 10 mapped to 21 11, 12 mapped to 22 13, 14 mapped to 23 15, 16 mapped to 0

Open Defects in Fabric OS v6.1.0_ del1

This section lists defects with Critical, High and Medium technical severity that are open in Fabric OS v6.1.0_del1 as of the time of release. While these defects are still formally "open," they are unlikely to impede Brocade customers in their deployment of the Brocade M5424 and have been deferred for resolution in a later release.

None of these defects have the requisite combination of probability and severity to cause significant concern to Brocade customers.

Note that when a workaround to an issue is available, it is noted.

Defect ID	Technical Severity	Summary of OPEN Defects in Fabric OS v6.1.0_del1
DEFECT000224460	High	Summary: Host may lose targets on edge AG in cascaded setup when failover from core-AG to another core-AG connected to different edge fabric switches. Symptom: Host would lose targets on edge in cascaded setup when F-port is failed over from one N-port connected on one core-AG to another N-port connected to another core-AG. Workaround: Disable/enable the N-port Customer Impact: Workaround available Feature: Access Gateway Services Function: CLI Reported in Release: FOS6.1.0_del
DEFECT000218368	Medium	Summary: AG N_port connected to embedded switch in inter-op mode 2 could not restart traffic after switchdisable/enable followed by configupload/download. Symptom: Unable to restart traffic. Customer Impact: Unlikely User Scenario Feature: Access Gateway Services Function: CLI Reported in Release: FOS6.1.0_del

DEFECT000218672	Medium	Summary: ipc error and software verify error detected on M5424 running in switch mode when a new Admin Domain is created and an existing cfg is disabled in one of the existing AD Symptom: When a new Admin Domain is added to existing AD database, "error: ipc failed -5" is detected and the new AD does not get added. Customer Impact: Unlikely User Scenario Feature: Embedded Function: FC Service Reported in Release: FOS6.1.0_del
DEFECT000226406	Medium	Summary: When an F-port cable is swapped with a trunked N-Port cable, the auto policy on M5424 AG detects the N-Port as G-Port. Symptom: When an F-port cable is swapped with a trunked N-Port cable (slave port), Auto policy detects the N-Port as G-Port. Workaround: Disable/enable the N-port stuck in G-Port Status will bring the port online as N-port (trunk slave). To avoid this, disable the ports to be swapped first. After swapping them, enable those ports. Customer Impact: Workaround Available Feature: Access Gateway Services Function: CLI Reported in Release: FOS6.1.0_del

DEFECT000229015	Medium	Summary: With M5424, observed “FFDC event occurred - Port 1 chip faulted due to an internal error.” after creating a new zone and deleted an old zone from the active configuration Symptom: The port will go down and will not pass traffic. Customer Impact: Unlikely user scenario Feature: Embedded Function: ASIC Driver Reported in Release: FOS6.1.0_del
DEFECT000229170	Medium	Summary: F-port may not get disabled when their configured N-port which is offline is moved to a different PG and F-port was originally online via other N-port in the original PG. Symptom: F-ports does not get disabled as expected. Workaround: Manually disable the F-port Customer Impact: Workaround available Feature: Access Gateway Services Function: CLI Reported in Release: FOS6.1.0_del